



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/145,982

09/03/1998

TOMOHARU HASE

684.2728

6632

5514

7590

06/22/2004

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

NGUYEN, HUNG

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/145,982

Applicant(s)

HASE, TOMOHARU

Examiner

Hung Henry V Nguyen

Art Unit

2851

Am

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36,37,44,57,58,65 and 68-82 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 36,44,57,58 and 65 is/are allowed.
- 6) ☒ Claim(s) 68-82 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 74-77 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 74, the recitation of “wherein said first aperture, said third aperture, said second aperture are disposed along the named order, with respect to a rotational direction about an optical axis of said apparatus” is ambiguous and indefinite. It is unclear how to arrange the apertures as claimed. It is not clearly whether the rotational direction about the optical axis is clockwise or counter clockwise ?

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

As the best claimed subject matters are understood (see rejection under 112, second paragraph, supra). Claims are anticipated by reference.

With respect to claims 74 and 77, Tanimoto et al (fig.1) discloses an exposure apparatus comprising all basic features of the instant claims including: a first separating portion for

Art Unit: 2851

separating a first space and second space from each other, the first separating portion having a first aperture (a1) and a second aperture (a2) and a second separating portion for separating the second space and a third space from each other, the second portion having a third aperture (b1) and a fourth aperture (b2) wherein "the first aperture, the third aperture, the second aperture and the fourth aperture are disposed along the named order, with respect to a rotational direction about an optical axis of the exposure apparatus (see figure 1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 68-73 and 78-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanimoto (U.S.Pat. 4,690,528) in view of Siga et al (U.S.Pat. 4,725,126).

With respect to claims 68-73 and 78-82, Tanimoto et al (fig.7) discloses an exposure apparatus comprising all basic features of the instant claims including: an optical system (201) having at least one optical element (L1-L5) and including a supporting portion (205) for supporting at least one optical element and having a plurality of apertures (211-213) through which a gas can flow; an illumination optical system (102) for illuminating a reticle (R) and a gas supply (223); the optical system comprises a plurality of spaces (a-d) where the notches of the two adjacent two lenses are placed at different positions with respect to rotational direction

Art Unit: 2851

about the optical axis of the optical system. Tanimoto does not expressly disclose the notches being formed at an end portion outside an effective light flux of light from the light source.

However, this structure is well known per se. For example, Siga et al teaches a lens (11) having notches/ dents/ indentation (12) formed at the end portions outside the effective light flux of light (see col.1, lines 16-18 and figures 1-3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Tanimoto and Siga et al to obtain the invention as specified in the above mentioned claims of the present application.

It would have been obvious to a skilled artisan to modify the lens of Tanimoto and to form notches at an end portion outside an effective light flux of light from the light source as taught by Siga et al. The at least purposes of doing so would have been to and to provide a flow passage of gas between spaces of the lenses and to reduce the optical strain of the lenses.

Allowable Subject Matter

6. Claims 36, 37, 44, 57, 58 and 65 are allowed.
7. Claims 75-76 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Amendment/Argument

8. Applicant's amendment filed April 12, 2004 have been entered. Claims 36, 57 have been amended. Claims 38-41, 45, 46, 59-62, 66, 67 have been cancelled. New claims 68-84 have

Art Unit: 2851

been added. In view of applicant's remarks in conjunction with the amendment, the rejection of claims 36, 37, 44, 57, 58 and 65 under 35 U.S.C. 112, first paragraph is withdrawn.

Turning to the prior art rejection, applicant's arguments with respect to claims 36 and 57 have been found to be persuasive. Accordingly, claims 36, 37, 44 and 57-58 and 65 are allowed. The allowability of newly added claims 68-82 have been carefully considered but have been traversed as set forth above.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

Art Unit: 2851

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 571-272-2112. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hung Henry V Nguyen
Primary Examiner
Art Unit 2851

hvn
6/21/04